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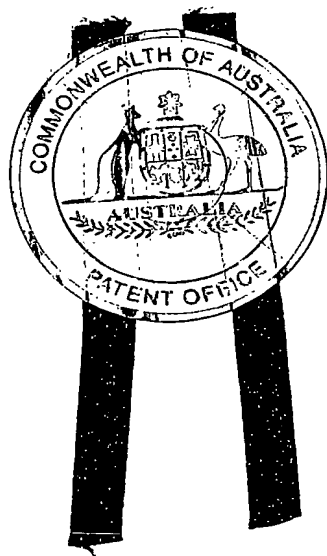
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I, JONNE YABSLEY, TEAM LEADER EXAMINATION SUPPORT AND
SALES hereby certify that annexed is a true copy of the Provisional specification
in connection with Application No. PS 2655 for a patent by IBJ RESOURCES
PTY LTD as filed on 30 May 2002.



WITNESS my hand this
Eleventh day of June 2003

J R Yabsley

JONNE YABSLEY
TEAM LEADER EXAMINATION
SUPPORT AND SALES

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AUSTRALIA
Patents Act 1990

PATENT REQUEST : PROVISIONAL APPLICATION

I, being the person identified below as the Applicant, request the grant of a patent for an invention described in the accompanying provisional specification.

Applicant: IBJ INTERIOR SOLUTIONS PTY LTD
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Invention Title: MOUNTING SYSTEM

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DATED: 30 May 2002

IBJ INTERIOR SOLUTIONS PTY LTD

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NICK MOUNTFORD

Patent Attorney for and
on behalf of the Applicant

SEE AMENDED PATENT REQUEST
FILED:.....11.3.03.....

AUSTRALIA
Patents Act 1990

PROVISIONAL SPECIFICATION

Applicant:

IBJ INTERIOR SOLUTIONS PTY LTD
A.C.N. 100 211 890

Invention Title:

MOUNTING SYSTEM

The invention is described in the following statement:

MOUNTING SYSTEM

Field of the Invention

5 The present invention relates to a mounting system. The mounting system is particularly, but not exclusively, suitable for mounting of shelving.

Background to the Invention

10 One mounting system on the market is known as SLATWALL. This mounting system has a supporting panel, which is usually 2400mm wide by 1200mm high by 18mm thick. The supporting panel is formed of custom wood which has cut out of it seven horizontal slots. Each slot has a rectangular entrance portion extending the length of the
15 panel. Each entrance portion is about 10mm high and 4mm deep. The entrance portion then opens out to a larger interior rectangular cavity which is about 30mm high and 10mm deep and arranged symmetrically relative to the aperture so equal parts of the interior rectangular cavity
20 extend above and below the aperture. Seven aluminium extrusions are received within respective ones of the seven slots in order to reinforce the slots. Brackets are then mounted within the slot in order to support shelving.

25 One problem with this existing system is that when the brackets are supporting shelving, the weight on them tends to cause the bracket to bear on the extrusion in the region above the aperture. In turn, this tends to cause the reinforcing extrusion to bear on the portion of the supporting panel immediately above the entrance
30 portion. This portion of the supporting panel is 10mm long and only 4mm thick and is at right angles to the roof of the interior rectangular cavity. Accordingly, force applied to this portion of the panel tends to cause the custom wood to break in the vicinity of where it joins the
35 roof of the interior cavity and results in the reinforcing member and bracket pulling out of the supporting panel. A further problem is that the size of the rectangular cavity

is substantial relative to the size of the panel which can lead to the supporting panel bending or bowing. Further, the size of the openings are so big that they detract from the appearance of the mounting system.

5 Accordingly, it would be advantageous to provide mounting system which addresses at least one of these problems.

Summary of the Invention

10 Accordingly, the invention provides a mounting system having:

 a supporting panel having a cavity therein, the cavity having an aperture in a front face of said supporting panel, the aperture widening to a hook receiving portion of the cavity; and

15 a mount having a hook, the hook being shaped so that said mount may be fixed to said panel by locating a hook end within said aperture and rotating said mount so that said hook passes said aperture and locates within said hook receiving portion with said hook end abutting the roof of said cavity when said supporting panel is oriented in a substantially vertical plane, whereby a load applied to said mount below said aperture prevents said hook from becoming dislodged from said cavity.

20 Preferably, said cavity widens gradually from said aperture.

 Preferably, at its highest, said cavity is between 1.5 and 3 times as high as at the aperture and most preferably about 2.5 times as high.

30 Preferably, said cavity is formed by an elongate slot which defines an extended hook receiving portions adapted to receive a plurality of hooks of respective ones of a plurality of mounts.

 Preferably, said panel has a plurality of substantially parallel elongate slots.

35 Alternatively, said mounting system includes a plurality of cavities spaced horizontally apart from one

another when said panel is located in a substantially vertical plane.

Preferably, the height of the aperture is less than three times the thickness of the hook.

5 Preferably, said supporting panel has a plurality of rows of spaced apart cavities.

Preferably, said mount is part of a bracket.

In one embodiment, the hook is formed by a pair of arcuate portions which are joined together to define a generally v-shaped hook.

10 Preferably, the points defining the ends of the arcuate portions are disposed relative to one another such that if the points were joined by straight lines, said lines would define a substantially equilateral triangle.

15 Preferably, said hook receiving portion is formed in part by said cavity having a rear surface opposite said aperture, the rear surface having a complementary shape to the one of said arcuate portions which provides the hook end.

20 Preferably, a further surface of said cavity is shaped to support the other of said arcuate portions to thereby provide a further part of said hook receiving portions.

25 Preferably, said supporting panel is formed of custom wood or particle board.

Brief Description of the Drawings

A preferred embodiment of the invention will now be described in relation to the following drawings in which:

30 Figure 1 is a cross-sectional view showing a prior art mounting system;

Figure 2 shows a supporting panel of the present invention having a plurality of slots;

35 Figure 3 shows a supporting panel of the present invention having a plurality of holes;

Figure 4 shows a mount for use in the first

preferred embodiment;

Figure 5 shows a bracket including a mount of the first preferred embodiment;

Figure 6 is a cross-sectional view of the slot or
5 holes of the first preferred embodiment;

Figure 7 is a cross-sectional view showing the hook of the mount;

Figure 8 shows the mount being inserted into the hook receiving portion;

10 Figure 9 shows the hook received within the hook receiving portion; and

Figure 10 is a cross-sectional view of a mounting system of a second preferred embodiment.

15 Description of the Preferred Embodiment

A prior art mounting system which is known as SLATWALL and is available from AUSTRALIAN SLATWALL INDUSTRIES PTY LTD. The prior art mounting system has a supporting panel which has seven horizontal slots therein.
20 Each slot extends the length of the panel. Figure 1 is a cross-sectional view of one of these slots. Each slot consists of an opening aperture 101 which opens out to a larger interior rectangular hole 102. Typically, the supporting panel is formed of 18mm thick custom wood, in
25 which case the aperture 101 is about 10mm high and extends 4mm deep into the custom wood before opening to the wider rectangular hole which is about 10mm deep and 30mm high. A reinforcing extrusion 103 is fitted into the slot and as shown in Figure 1 tends to fit slightly loosely within the
30 slot.

In use, a mount 104 of a bracket is placed within the slot. In use the mount will generally support a bracket which in turn will support shelving. When force is applied to the mount 104 by weight on the bracket it
35 tends to cause the end 106 of the mount to bear on the portion 107 of the reinforcing extrusion 103 located above the aperture 101. This in turn causes the reinforcing

portion to bear on the flange 105 located above the aperture 101. This, in turn tends to cause the flange to break and the reinforcing extrusion 103 and bracket to pull out of the supporting panel.

5 Further, the relative size of each of the slots consisting of aperture 101 and rectangular hole 102 is such that it tends to weaken the supporting panel and causing it to bend or bow.

10 Referring now to Figure 2, there is shown a supporting panel 1A having a plurality of cavities in the form of elongate slots 2. An alternative supporting panel 1B is shown in Figure 3 which has a plurality of cavities in the form of rows of horizontally spaced apart holes 3. Figures 2 and 3 are used for illustrative purposes to show
15 the general layout of the slots or holes and any dimensions indicated in these drawings are purely indicative. Supporting panels 1A, 1B represent alternative choices to a user of the mounting system who may prefer the aesthetics of one design over the other.
20 Irrespective of the panel the slots 2 and holes 3 will typically be of the same cross-section so that standard mounts can be used irrespective of the choice of panel.

Referring now to Figure 3, there is shown a mount 4 of a first preferred embodiment. The mount 4 consists
25 of a generally v-shaped hook 5 and a flange 6 which in the first preferred embodiment is designed to rest flat against the front face 16 of the supporting panel 1. In other embodiments, the width of the connecting portion 7 which connects the hook to the flange may be increased in
30 order to accommodate, for example, a piece of glass between the front face 16 of the panel 1 and the flange 6.

As shown in Figure 5 shows a bracket 8 incorporating mount 4. Several of these brackets 8 can be located either at spaced apart locations within slots 2 of
35 panel 1A or within horizontally spaced apart holes 3 of panel 1B in order to support a shelf.

Figures 6 and 7 are cross-sectional views of the

slots/holes and hook respectively. With respect to Figure 7 and following Figures 8 and 9 it is noted that the entirety flange 6 of the mount is not shown for convenience of illustration.

5 Referring to Figure 7, it will be apparent that the hook 5 is generally v-shaped and has a first arcuate portion 9A and a second arcuate portion 9B. The ends of the arcuate portions 15 are disposed relative to one another such that if they were joined by lines they would
10 form a substantially equilateral triangle. This configuration allows the hook 5 to pass an aperture 10 of the cavity and locate within hook receiving portion 11 of the cavity while also allowing the aperture 10 to be relatively narrow. For example, where the hook arcuate
15 portions 9 are approximately 1.5mm thick it is possible to pass the hook through an aperture which is about 4mm high. Thus, the height of the aperture can be less than three times the thickness of the hook.

The technique for locating the hook 5 within the
20 hook receiving portion 11 of the cavity is shown in more detail in Figure 8. The end 15B of the hook 5 is first located within aperture 10 and as the hook is passed through the aperture 10 further into the hook receiving portion 11, the mount 4 is rotated downwardly such that
25 the hook 5 locates within the hook receiving portion 11. In this respect, it will be noted that the end 15B of the hook 5 abuts the roof 12 of the cavity. When weight is applied to the mount, it tends to drive the hook into the roof 12 so that a force is applied to the interior of the
30 panel instead of against an outer flange as in the prior art. This greatly reduces the prospects of the panel breaking.

The cavity is also shaped so that the hook 5 fits snugly within the hook receiving portion 11 with the first
35 arcuate portion 9A abutting a rear surface 13 of the cavity and the second arcuate portion 9B being supported on a bottom surface 14 of the cavity. The relative

position of these surfaces 13, 14 being defined relative to front surface 16 of the panel 1 when the panel 1 is oriented in a vertical position.

5 The cavities of the first preferred embodiment are symmetrical so that the supporting panel does not have a specific "up" orientation. However, it will be appreciated that the cross-section does not need to be formed in a symmetrical manner in order to receive the hook receiving portion.

10 It will be apparent to persons skilled in the art that various modifications may be made to the present invention without departing from the scope of the invention. One such alternate embodiment is illustrated in Figure 10. The hook 25 is part of a mount 26 which
15 supports bracket 28. Aperture 20 widens gradually to a wider hook receiving portion 21 which is about 2.5 times as high as the aperture. The hook 25 is of more conventional shape than the hook of the first preferred embodiment but still bears on an upper portion 32 of the
20 hook receiving portion 21.

It will be apparent to persons skilled in the art that the upper portion 32 in this case is angled and hence that, the bearing surface on which the hook end bears does not need to be perpendicular to the front face 16 of the
25 board. As the hook receiving portion widens gradually from the aperture 20, it means that the force required to cause failure of the panel must be much more substantial than in the prior art even if some of the force applied by the end of hook 25 is applied in a direction towards the
30 front face 16 of the board 1.

Other variations will be apparent to persons skilled in the art, for example, the hook of each mount does not need to be continuous and could be formed by a plurality of spaced hook portions. Further, while it is
35 preferred that the aperture be kept as narrow, in some applications a narrow aperture will not be essential and the ratio of the height of the aperture to the highest

portion of the cavity can be in the range of approximately 1.4-4:1 but more preferably in the range of 1.5-3:1.

5 It will be apparent to persons skilled in the art that they may make various variations to the mounting systems of the first and second embodiments without departing from the scope of the present invention. Such variations are considered to be within the scope of the invention described herein.

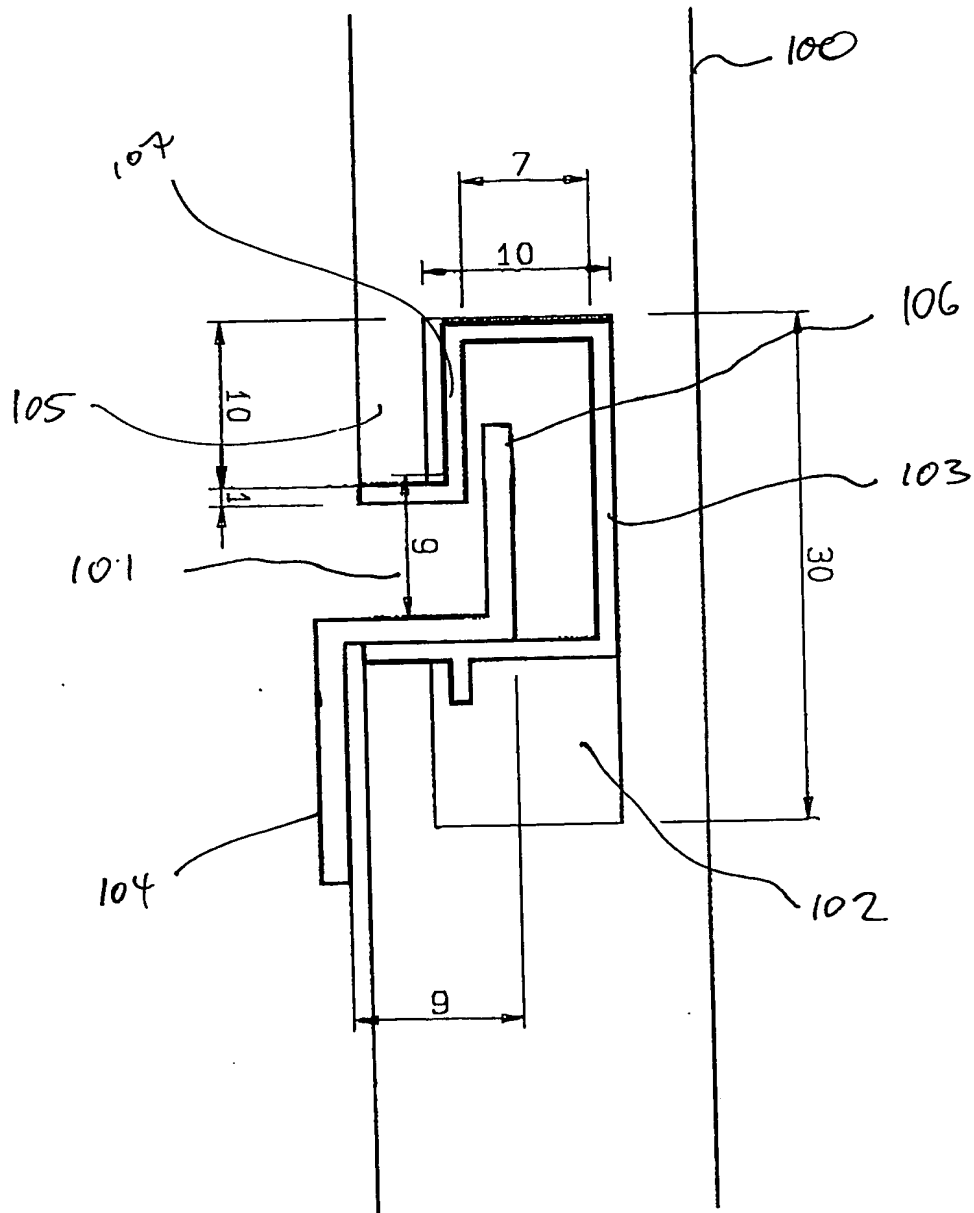


FIG 1. (PRIOR ART)

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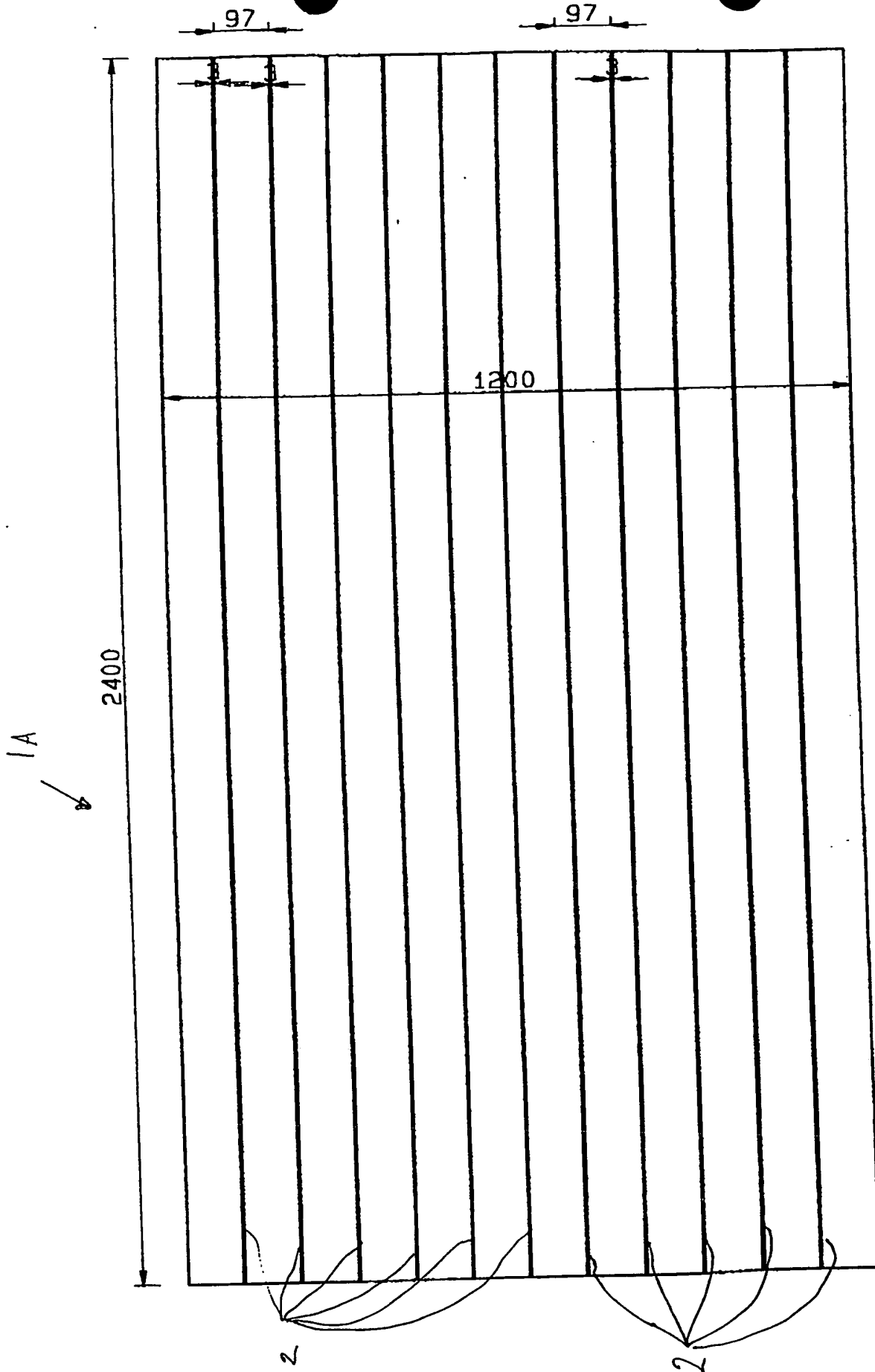


Fig. 2

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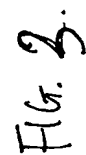


Fig. 2.

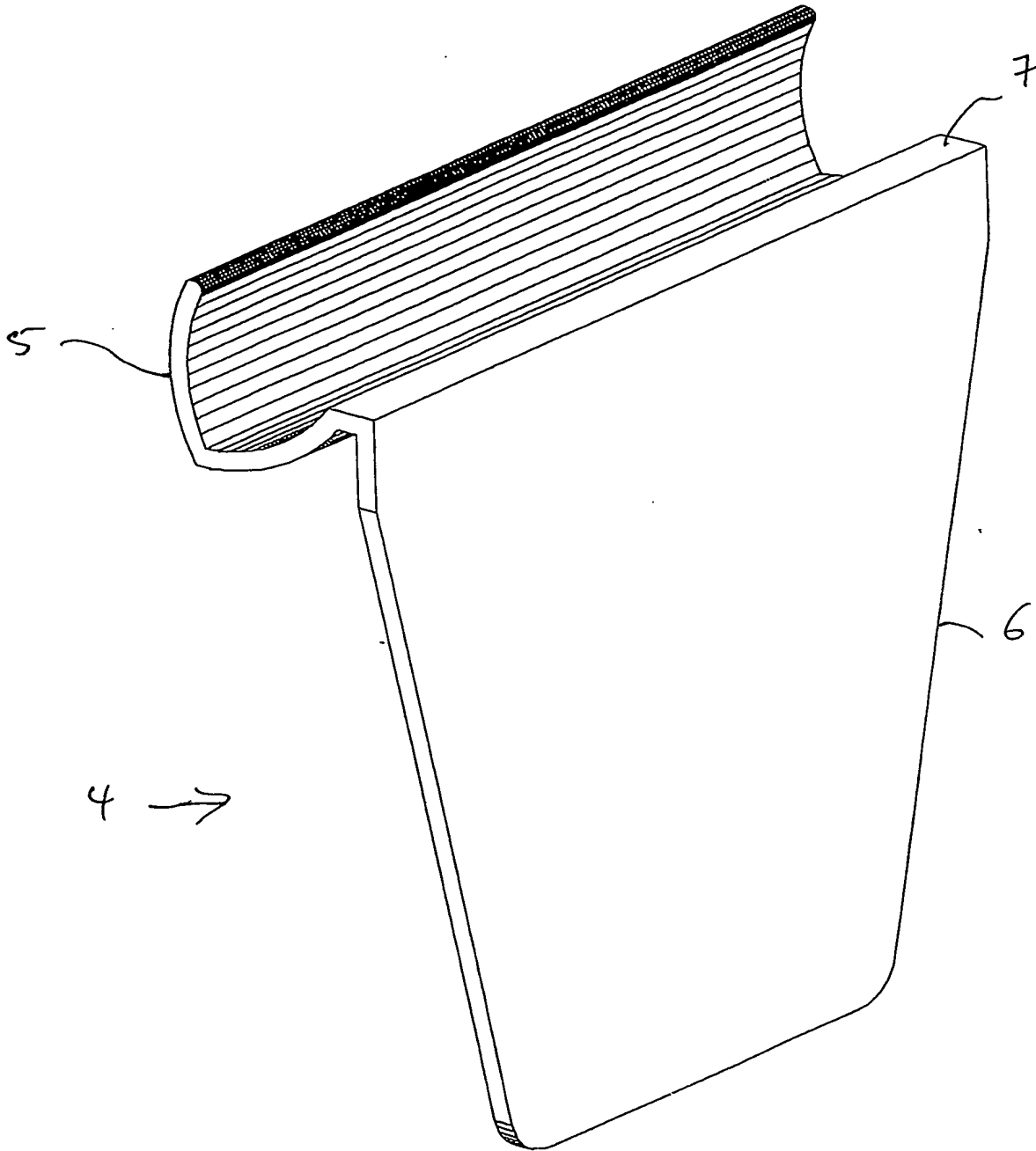


FIGURE 4

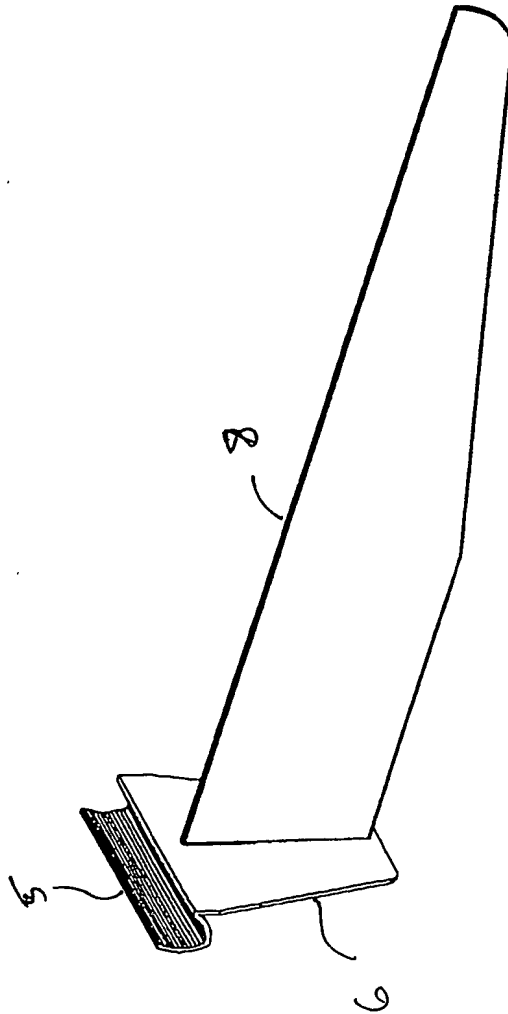


FIGURE 5

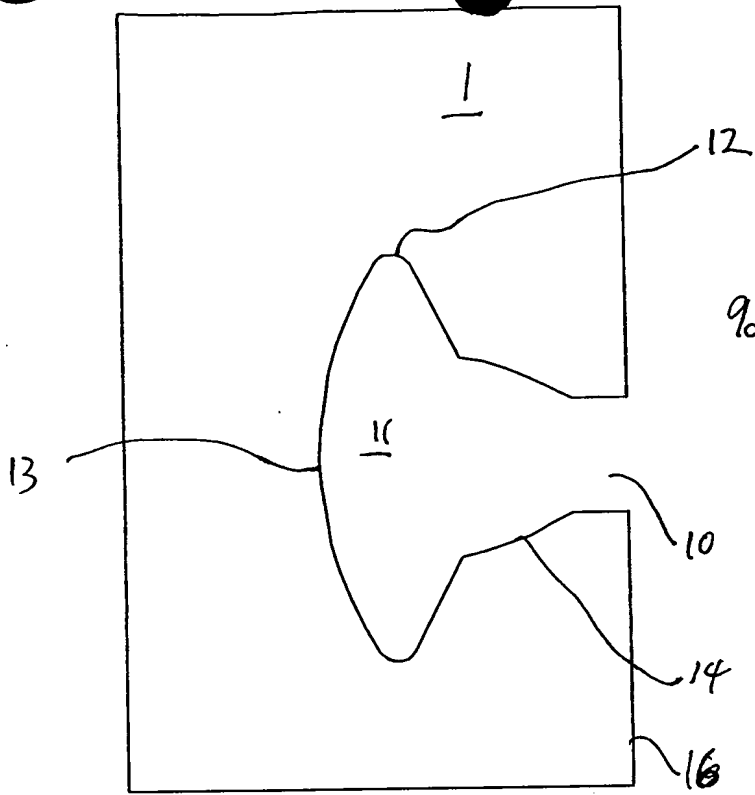


FIG. 6.

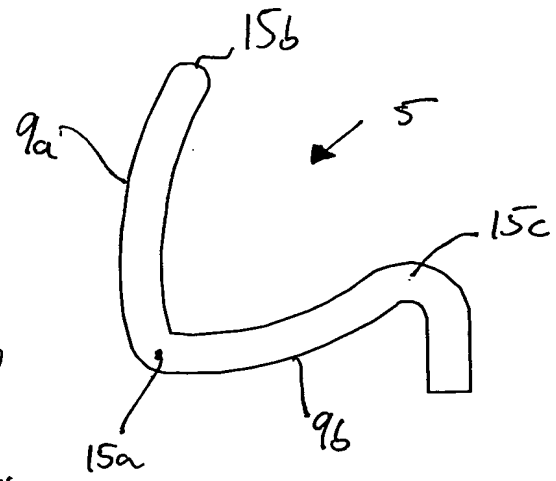
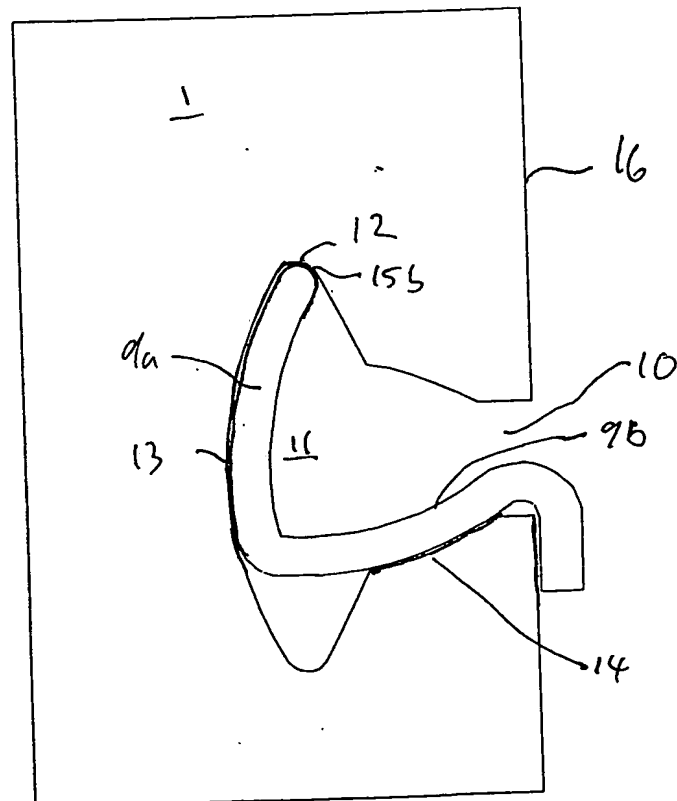


FIG. 7.

FIG. 8



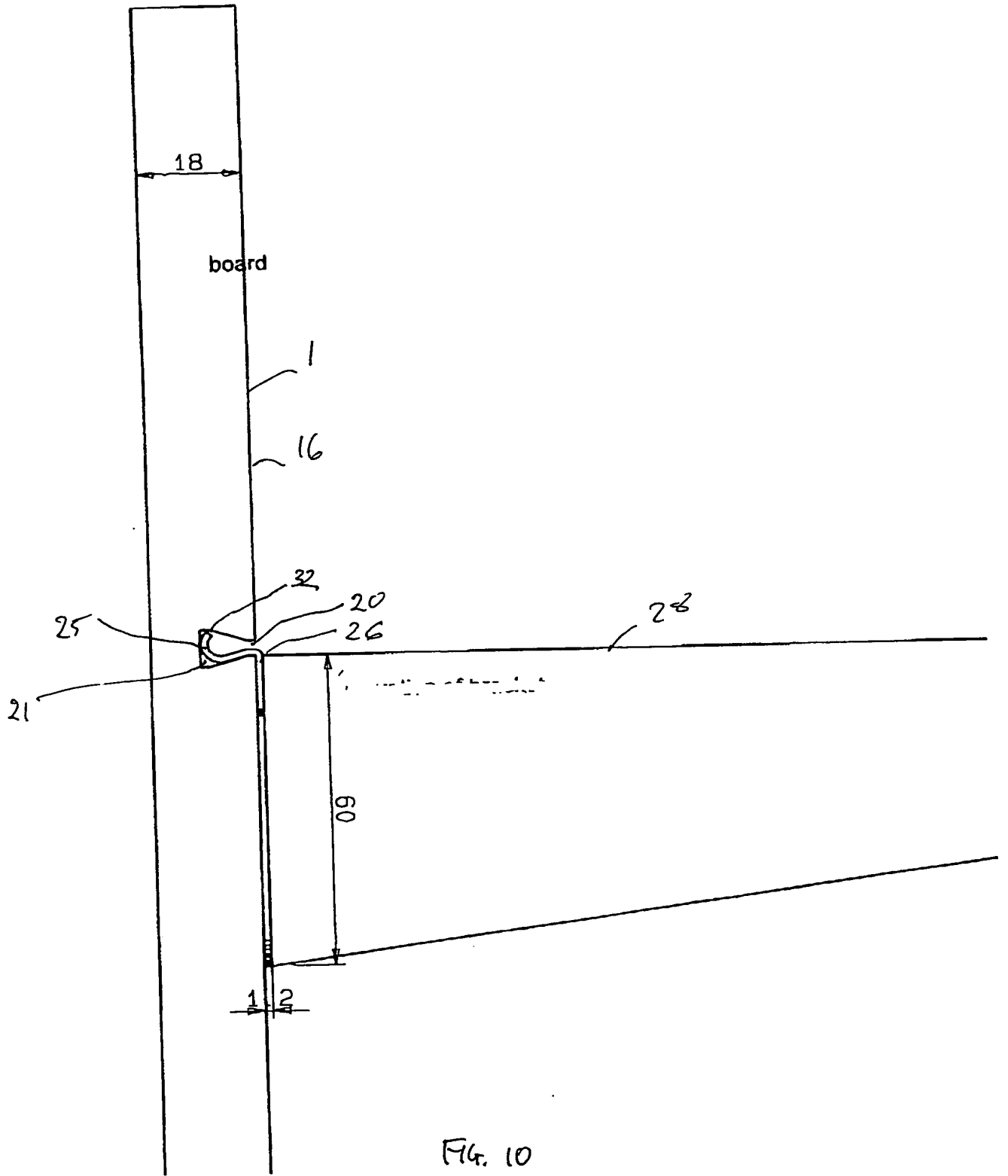


Fig. 10